



# MAGAZINE

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FRONT COVER: *Kingfisher in flight. A remarkable photograph by Eric Hosking of a kingfisher taking off from a hole in the side of a river bank.*

OUR CONTRIBUTORS

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THE FIGHT FOR PENICILLIN

How I.C.I. Bridged the Gap from the Laboratory stage

By R. A. Walmsley (Dyestuffs Division)

In 1943 I.C.I. scientists were called in by the Government to do a rush job of the first importance—to pioneer the production of penicillin in quantity. It was a problem of great complexity. By 1944 1000 doses of penicillin a week were being produced from mould grown in 6000 milk bottles.

PENICILLIN was an entirely British discovery, due to Sir Alexander Fleming. What he discovered was, to put it simply, that a common mould growing under certain conditions excreted a chemical substance which—in minute concentrations—would kill germs. That was in 1929, and eleven years passed before the next stages were completed—the isolation of the chemical and the determination of its structure. The initial isolation of penicillin was a British achievement, due to the work of a team under Sir Howard Florey at Oxford, while the determination of its structure was a joint effort of teams in Britain and America.

But all this, which is well-known history, was only a beginning. The equally great problem of developing a method of producing penicillin in bulk at a reasonable price had yet to be found

It is at this point that I.C.I. enters the picture. By 1943 I.C.I. industrial scientists at Blackley had made the first adequate quantities of crude penicillin for use in actual clinical trials at Oxford. It was impure, unstable and, by today's standards, fantastically expensive, but there was enough of it for experiments on man, and its production marked the first big step forward in the development of the new compounds on a practical scale.

And now, before we can appreciate the problems that had to be overcome if penicillin were to be produced cheaply and in bulk, we must consider a few basic principles. Most of us have a vague idea that a mould similar to that which forms on damp stale bread is now somehow being purified and applied to wounds, where it kills other germs. But it is necessary to go deeper than this.

It is difficult to define a mould, just as it is difficult to define a dahlia, but the general idea of a mould as a white or greenish growth on stale food is quite accurate enough for our purposes. Now a mould is a living micro-organism, and, like all living things, as it grows it absorbs chemicals and gives out chemicals. The point is that a particular kind of mould—called *penicillium notatum* after its pencil-like appearance under the microscope—growing under certain conditions produces an organic acid that kills bacteria. This acid is a pure chemical, and it could be given a proper chemical name now that its formula is

known, but originally, when its formula was not known, it was called penicillin after its parent mould for convenience.

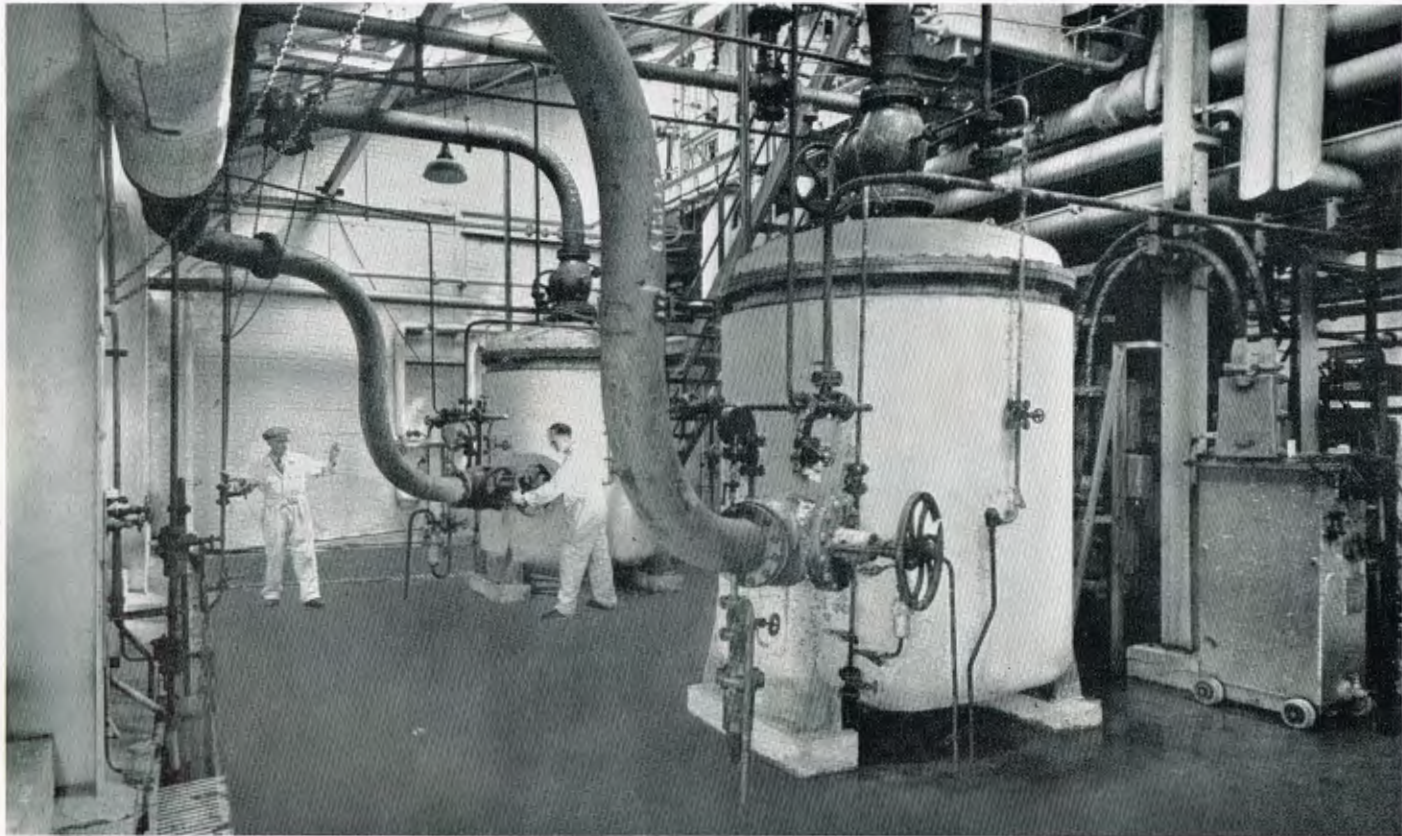
This may all seem very complicated, but it is only the beginning of our troubles—and it is only by appreciating the full complexity of the procedure that we can realise what a tremendous task confronted the men who had to produce penicillin in bulk.

In the first place, there are hundreds of different strains of penicillium, and variants of these can be made by exposure to ultra-violet light or X-rays. Secondly, there are many different ways of feeding the mould. So it is a matter of selecting

the strain of mould and manner of feeding that will give the largest quantity of the required type of penicillin.

Then the penicillin has to be separated out of the broth in which the mould grows, and this again is extremely difficult because the acid liberated by the mould is highly unstable. Finally, the penicillin in its acid form has to be converted to a more stable salt so that it can be further purified and stored for use when needed.

The more obvious way of growing the mould is the natural way, on the surface of its food. This was the method originally used by I.C.I., who in 1944 were producing 1000 doses of



BACTERIA-FREE AIR being supplied to the penicillin fermenters



penicillin weekly from mould grown on the surface of a suitably modified sugar solution contained in 6000 quart milk bottles in a new plant at Trafford Park.

As a result of process developments and the increased scale of operation, the cost of producing a standard unit of penicillin on this plant dropped from more than £100 sterling to less than £10. The finished product, a yellowish-brown, unstable powder, contained about 30% penicillin.

At the same time, at the urgent request of the British Government, I.C.I. were designing and ordering plant for the first full-scale industrial surface culture factory in the world. This plant had a scheduled capacity of about 12,000 penicillin doses weekly and covered a factory area of five acres.

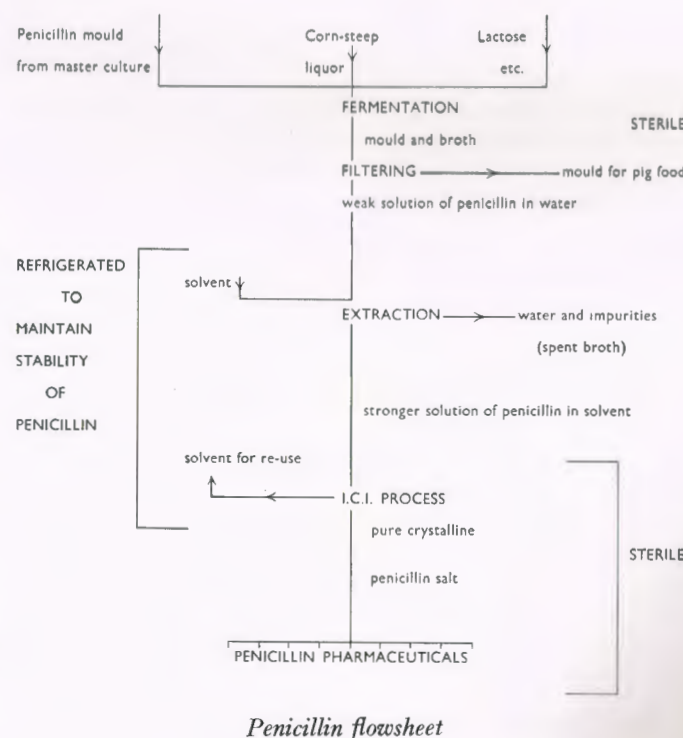
It is not difficult to visualise the sort of problems encountered in scaling up from a quart bottle to a factory occupying a site of this area, involving a product which had defied separation in the most minute quantities for over ten years, and with an untried process using techniques entirely new to the chemical industry. The problem of ensuring the complete absence of even a single colony of any foreign bacteria or mould throughout the complex system of pipe-lines, valves and vessels in an industrial plant on this scale had to be tackled with little or no background of experience. Initially, every type of air, soil and water-borne organism but *penicillium notatum* grew and flourished in the culture medium. Gradually, as the various problems were successively overcome, the output reached and passed its scheduled figure, and as a result of I.C.I. researches a pure, stable, crystalline white product consisting of the single chemical, benzyl penicillin sodium salt, was produced.

Until the end of the war I.C.I.'s main task was to maintain production of penicillin at all costs, but by 1945 the chemists at Trafford Park were able to turn their attention from the surface-culture method to the theoretically much more efficient deep-culture method—more efficient because it takes up so much less room and because the processes can therefore be more easily protected against contamination. It is worth noting that I.C.I. was the only concern outside the United States to develop independently a successful deep-culture process for making penicillin.

The idea of deep culture is simple enough: instead of growing the mould on the surface of the nutrient liquid you grow it in the liquid, which is air-blown and agitated so that the mould can get the oxygen it needs. The snag is that unless everything



THE STERILE AREA where pharmaceutical preparations of penicillin are made and filled into containers for sale



Penicillin flowsheet

is just right the mould does not even grow, let alone produce penicillin, and until it is growing there is no means of telling what the right conditions are.

Today these problems have been overcome and I.C.I. is producing vast quantities of penicillin salt, the cost of a standard factory container of it having been reduced in the last five years from £14,000 to £100!

The process at present used at Trafford Park is simply explained in the following diagram. The master culture of the selected strain of penicillin is propagated in stages: first in a test tube, then in a bottle, and finally, having been transferred to the plant under sterile conditions, in a series of vast tanks of a solution of lactose, corn-steep

liquor and other nutrients and auxiliary chemicals.

The contents of the final tank—a kind of thick soup—are filtered to separate the mould from the liquid. It is the liquid which contains the penicillin. The mould is removed from the filter in the form of a thick, soggy blotting paper and is sent away for use in pig food on account of its useful protein content. The penicillin is then separated from the spent broth by solvent extraction.

The principle is to add to the broth a solvent in which the penicillin acid will dissolve more readily; the solvent is then separated from the broth by centrifuging (on the dairy cream separator principle) and takes the penicillin with it. The penicillin is recovered from the solvent—by a special I.C.I. process—in the form of a pure crystalline salt, while the solvent goes

back to the plant to be used again. The pure crystalline penicillin salt is packed in a sterile room and is then ready to be used in the various penicillin formulations marketed by Imperial Chemical (Pharmaceuticals) Ltd.

If this account of the manufacture of penicillin seems to lack graphic descriptions of awe-inspiring machinery, it is because the process is so much more impressive than the plant. The groups of great vessels, the clusters of valves and the maze of pipework convey no real idea of the dynamics of the process—the constant attention needed to control the mass of variables upon which the production of penicillin is so delicately balanced. The most outstanding characteristic of the plant is its smell—a stimulating mixture of peardrops and stout, mainly attributable to the solvent and the corn-steep liquor.

Like all chemical manufacturing processes, the manufacture of penicillin has to be subject to routine control. The men working the plant must know what is going on inside it, so that if there is any departure from proper conditions it is quickly spotted and corrected. This means, of course, that the broth must be regularly tested at various stages for penicillin content, and the way in which this is done is worth describing.

Theoretically there is nothing against analysing the broth sample chemically to find its penicillin content, but in practice it is quite out of the question to carry out such an analysis as

a routine operation, as it is far too complicated. Instead, the bacteria-killing power of the sample is measured direct and the penicillin concentration inferred from this.

A standard glass plate coated with a standard feeding jelly is infected with a standard bacteria and stored at a temperature too low for the bacteria to breed. The broth to be tested is dropped into a little cylinder in the centre of one of these plates and the whole thing is then transferred to a warm atmosphere so that the bacteria can breed. As they breed, they cloud the jelly, but the penicillin in the cylinder of broth kills all the bacteria within a certain radius, so that there is a clear circle in the middle of the plate. The diameter of this circle is a measure of the penicillin content of the liquid in the cylinder. The special plates are called agar plates, and they are now very well known and widely used for testing the activity of other bactericidal chemicals in the way here described.

There are many more fascinating side issues in large-scale penicillin production—such as the problems involved in maintaining sterile conditions in the plant and its miles of piping, or the little matter of providing germ-free air for supplying the oxygen needs of the broths. In fact, the development of the process is to no small extent a story of solving the problems set by side issues. But there is no space to deal with them here.

What of penicillin's future? "My advice to you, gentlemen," a famous physician is reputed to have told his students, "is to use the new remedies while they still work!" But we need have no misgivings about penicillin.

It is very different from streptomycin, for example, in that relatively few cases of drug-resisting organisms have been met with in the last ten years. Penicillin is no fashionable remedy or temporary expedient, but an established, essential drug with an ever-widening sphere of usefulness. And it seems to have other possibilities too. It is one of those substances that, when added in minute quantities to the food of young pigs and poultry, cause the animals to grow faster and bigger for a given ration. It was originally suggested that the penicillin "suppressed undesired flora in the intestine"—or killed off the unco-operative bugs in the gut—and thus enabled the animal to make better use of a given amount of food. Now, however, most of the authorities think that there is more to it than that.

## STILLS FROM THE I.C.I. PENICILLIN FILM 1947



Sir Alexander Fleming, discoverer of penicillin, examining mould culture



Penicillin mould grown in the laboratory by surface culture



Sir Howard Florey, developer of penicillin



An early preparation of crude penicillin



# THE MOTH MAN

IN a basement laboratory at Hexagon House, headquarters of Dyestuffs Division, Arthur Roberts is engrossed in the job of rearing thousands of moths and beetles and feeding them on bits of flannel.

Arthur showed me round his moth room. It was warm and humid—the sort of atmosphere that suits moths and carpet beetles. Stacked up on shelves all round the walls were large glass jars with muslin covering the tops. Inside each jar were hundreds of tiny yellow moths that had hatched out from their grubs. Pieces of woolly flannel lay on the bottom of the jars to serve as food for the grubs. Arthur took a jar down from the shelf and tipped it up. The little drab moths fluttered about excitedly. “We rear about 4000 a day,” he told me. “These are *Tineola bisselliella*, the common clothes moth. We’ve carpet beetles as well in some of the other jars. They’re the insects which do so much damage to woollen materials in Eastern countries.”

He described the experiments they did with their insects. On tables in the room there were lots of little round metal boxes about an inch in diameter. Across the open end of the boxes were stretched samples of cloth, and inside the boxes were moth grubs who had been condemned to several days’ imprisonment in the tiny cells. During their imprisonment the moth grubs would chew away at the woollen cloth forming the floor of their cells. Then, after a definite time, Arthur and his colleagues would remove the grubs, see how many had died, and weigh the cloth to find out how much fabric had been eaten. The object of this work is to test the palatability of cloths treated in various ways to discourage the moth grubs. The amount of cloth eaten gives a measure of the effectiveness of the substance used for impregnation.

Quite a lot of research is going into the development of these mothproofing agents just now. Moths do an enormous amount of damage to our clothes and textiles every year, and defeating them is a problem that is well worth tackling. It has been estimated that moth grubs eat their way through about a thousand tons of wool a year. But of course the actual amount does not match up with the damage they do. One aristocratic moth grub making a meal from a model gown can soon run up an expensive bill, even though it eats away only an insignificant amount of wool. American experts have estimated that moths cost their country over 100 million dollars a year in damage of this sort.

The actual damage is done by the moth grub after it hatches from the egg. The moth itself cannot eat. It simply lives a life of wild abandon for a fortnight or so, and then dies.

Before it does so the female moth lays her batch of about fifty eggs, and being a thoughtful mother she lays her eggs on a nice choice piece of wool so that there will be plenty for the grubs to eat when they hatch. The job of the anti-moth scientists is to find a way of discouraging the grub from starting on its meal.

Why moth grubs persist in eating wool is not exactly known. Experiments have in fact shown that clean wool does not make a good staple diet for them. Something like fish-meal is much better. Fed on a diet of fishmeal, a moth grub has a much quicker life cycle and seems happier altogether. Also, the grub has to have a good supply of vitamin B or it does not complete its life cycle at all. The grubs reared by Arthur Roberts for his tests are actually given a supplementary diet of yeast and cholesterol in addition to their flannel.

It is through the food that the moth problem can best be tackled, by finding substances that can be put on to wool so that it becomes objectionable to the moth grub. Anything used in this way has to be permanent. It is no use putting something on to the wool which is going to be washed off when the clothes are cleaned. Nor must it affect the quality of the cloth or discolour it in any way.

Recently Dyestuffs Division have been developing very effective agents, such as ‘Lanoc CN,’ for this job. They are substances which can be actually fixed chemically to the wool fibre, just as a red or blue or green dyestuff is. But these substances are colourless. They are like colourless dyes. And just as dyes will resist being washed off the fabric, so do these anti-moth chemicals.

When the moth grub hatches from its egg and finds itself on a piece of fabric impregnated with these anti-moth agents it starves to death rather than eat it.

I saw samples of wool fabric which had formed the floor of some of the grubs’ tiny metal cells. They were absolutely untouched, as they had been impregnated with an anti-moth chemical. Samples of ordinary wool, on the other hand, had begun to look like bits of lace where the grubs had been tucking in ravenously.

This business of impregnating the wool is one most effective way of dealing with moths. But there is another way which is being examined. Now that a good deal is known about the chemical nature of wool itself, its chemical structure can be altered by certain types of treatment, and by careful manipulation it can be changed in such a way as to make it unpalatable for moths. The fibre itself remains just as strong and elastic as ever, but it means indigestion to the moth grub. J.G.C.

Arthur Roberts (Moth Man)

## DEVELOPMENT OF THE CLOTHES MOTH.

Approx. Size.	Life Period Growth
1mm.	Hatch
1mm.	Up to 4
9mms.	depending
	food & temper
	14-44 days.....
	[very variable]
	Males 28-56 days.
	Females 16-2







## CENTRAL WORKS COUNCIL

*Twenty per cent increase in pensions—staff grade scheme to be considered by the Board—Board asked to subsidise safety boots—lively debate on canteen costs*

CENTRAL Works Council met at Scarborough on 23rd May on as perfect a spring day as anyone could have wished for. There was hardly a cloud in the sky, and below on the sands the traditional seaside donkeys stood drawn up in a neat little platoon as if to entice Works Councillors to throw their duties to the wind and become children again. Everyone lingered as long as they could enjoying the view across the bay before reluctantly entering the conference hall. But the spirit of that lovely day was not lost indoors. Under the benevolent but skilful chairmanship of Mr. John Rogers the meeting was always good humoured and speakers were almost without exception lively and to the point.

The chairman opened with a warm tribute to the memory of Mr. H. O. Smith, such a familiar and well-loved figure at Central Council for so many years. He then turned to the theme of the future of this country and of the commonwealth, and spoke of the trade recession so noticeable in textiles, a recession making itself felt no less in the United States; and he pleaded for a coalition "of the best brains" to solve our difficulties. The land of opportunity today, he said, was Canada, where the big largely unexploited resources of oil and

natural gas meant a bright future of industrial expansion. He himself had visited Canada quite recently and now Dr. Fleck, deputy chairman, who possessed great technical knowledge, would shortly be following in his footsteps.

The meeting then listened to a truly remarkable statement by Mr. J. A. L. Young on the Workers' Pension Fund, which has, as already announced, an actuarial surplus of £2,345,000. He announced that—in round terms—members' pensions would be increased by 20 per cent and widows' and children's pensions would be introduced, and this without additional contribution from the workers.

These improvements, said Mr. Young, went beyond what could have been done from the surplus, and had been made possible by the generosity of the Company in agreeing to the payment of a further capital sum into the fund payable over about the next 25 years at a rate of some £280,000 a year. There was also going to be an increase in the rate of the Company's normal contribution. This would mean in all nearly half a million pounds a year more from the Company to the fund. Mr. Young's statement is printed in full on page 214. In the words of Mr. T. McCall, chairman of the workers'



Mr. J. Parkes (Alkali)



Mr. J. T. Tierney (Plastics)



Dr. A. C. Richardson (Nobel)



Mr. R. G. Burns (Wilton)



Mr. T. McCall (Nobel)



Mr. J. Hastings (Metals)



representatives, "this very generous action" exceeded expectations.

Next Mr. E. T. Grint, chief labour officer, announced the Board's answer to the Works Council resolution of last November that there should be an alternative to a clock as a 40 years' service award. An award, said Mr. Grint, must fulfil three conditions—it must be generally acceptable, it must be dignified and it must be of lasting value. These were not easy conditions to fulfil and after much thought the alternative of a silver salver had been decided on.

After this the meeting got into its stride, and a lively debate ensued on the various motions from different divisions for the improvement of the staff grade scheme. All speakers were agreed on one point—that they did not like the present system which limited promotion to staff grade to 50 per cent of those eligible. But there agreement ended.

### Staff grade quota criticised

Alkali Division, following the lead of Mr. Robin Allen's proposal at the last Central Council, wished to see the quota abolished. Their case was well argued by Mr. J. Parkes and Mr. W. H. Hubball. It was supported by Mr. J. Hastings, of Metals, who maintained that the change would pay the Company dividends in the shape of even better industrial relations and would attract better men to work for the Company. But when put to the vote the Alkali resolution was defeated by 109 to 89, despite the fact that only one speaker had argued against it.

Next came the Nobel and Dyestuffs resolution, that the quota be increased to 75 per cent with special consideration for workers with 30 years' service or more. This was put to the meeting by Mr. McCall.

With disarming frankness he admitted that a 100 per cent quota—in other words the abolition of the quota—was really the aim of workers' representatives, but that as the Board were unlikely to agree to this, they at Nobel preferred to press for the more modest improvement of a 50 per cent increase. When this was attained they would ask for more—an argument which brought Mr. Hastings once more to the microphone full of righteous indignation. It might be all right for a parliamentarian, he said, to ask for one thing and want another, but not for an industrialist. Such a manoeuvre was not honest. Abolish the quota once and for all, that was the right thing to do. And if there was no quota there would be no need to give special consideration to a 30 years' servant.

The motion then received support from an influential quarter—Mr. G. K. Hampshire, chairman of General Chemicals Division. He reminded the audience that the quota was a maximum not a minimum. Management were not obliged to promote up to 50 per cent of those eligible and he advocated a higher quota not because more workers should automatically be raised to staff grade but because it was right to give management greater latitude. There solution was then put to the vote and was carried with a substantial majority, but as there were a number of dissentient votes it was referred back once again to division councils under standing orders.

And so the meeting came to the third and mildest of the three resolutions—that put forward by Wilton Works to the

effect that the Board should be asked to "review the staff grade scheme with a view to removing the major difficulties." Proposed by Dr. A. M. Bloch and seconded by Mr. R. Burns, this motion obviously commanded general support by virtue of its very moderation.

Nevertheless, several votes were recorded against and the motion was therefore, like its predecessor, on the point of being referred back to divisions when the chairman intervened. He had listened, he said, with the greatest interest to what had been spoken. The arguments used were not new to the Board but they had been extremely well put and he promised that the Board would go into the matter. Mr. Alfred Inglis, with the technicalities of procedure at his finger tips, then piloted the Wilton motion into a position where it was successfully recorded as qualifying for submission to the Board.

After this the tempo relaxed. Dr. Alexander Fleck made an important statement on the subject of profit sharing. The gist of this statement, listened to with the closest attention, was that the idea of a profit-sharing scheme had not been rejected by the Company—nor for that matter were they satisfied of its merits. It had, therefore, been decided to await the report of the British Institute of Management, which was making a very careful examination of the whole question of profit-sharing schemes. It had also to be remembered that a profit-sharing scheme was not necessarily the best way of achieving what the promoters of the idea had in mind.

The meeting then turned to routine matters. The winners of the first aid competition—the Marston Excelsior team from Wolverhampton—were introduced to the chairman, who presented each man with a medal. After this statements on the I.C.I. Savings Bank and the I.C.I. National Savings Group, whose finances are in a sound position due to a wise policy of investment in securities of fixed redemption date, were made by Mr. Young and the meeting adjourned for lunch.

### A strong balance sheet

After lunch there were addresses from the platform by Mr. J. L. Armstrong, the treasurer, on the year's accounts; by Mr. W. J. Worboys, commercial director, on our home trade; and by Mr. E. A. Bingen, overseas director, on our export trade.

Mr. Armstrong tackled the job of explaining the Company's balance sheet, which he described as "one of the strongest balance sheets in British industry today and possibly one of the strongest in the world." Dealing with the consolidated profit and loss account, Mr. Armstrong drew attention to the increase in the Company's turnover from £221 million to £263 million, a rise of £42 million in a single year, which was an all time record for the Company. In view of this increased turnover, the rise in manufacturing and trading profits—from £29 million to £38 million—was "not really surprising." No less than £17 million, nearly half the profit, was made on our trading overseas.

After this the meeting turned to consideration of a Metals Division resolution, moved by Mr. F. Allcock and seconded by Mr. Gaunt to the effect that workers should remain eligible for the Benevolence Grant up to 12 months from the date of being struck off the live register, instead of for only 6 months as at present. This was carried *nem con*.



Dr. A. Fleck (Deputy-Chairman) and Mr. L. B. Ryder (Lime Division Director)



Mr. W. S. Bristowe (Head of Central Staff Dept.), Mr. H. R. Payne (Chief Safety Officer), Mr. E. T. Grint (Chief Labour Officer) and Mr. A. W. Inglis (Secretary Central Council)



Dr. R. N. Kerr (General Chemicals), Mr. W. H. Palmer (General Chemicals), and Mr. W. N. Hackett (General Chemicals)



Sir William Morgan (adviser on Civil Defence), Mr. John Rogers (Chairman), Mr. G. O. Hart (Wilton), Mr. H. Leonard (Wilton), Mr. J. J. Rees (Wilton), Mr. R. H. Hall (Wilton) and Mr. E. Maughan (Wilton)



Mr. A. Wilson (Nobel), Mr. C. R. Prichard (Chairman of Salt Division) and Mr. P. C. Allen (Group E Director)



Mr. A. W. Weir (Wilton) and Miss Bessie Webster (Central Labour)



Mr. Worboys then gave a most interesting analysis of our home trade showing how widely distributed it is (with engineering our biggest customer, the rest of the "big five" being agriculture, chemicals, textiles, and the motorcar-aircraft industry, in that order). This wide distribution of our sales, coupled with the wide range of our products, should enable us to stand up to a trade recession or "slump" to use a more ugly word now current, he said. Moreover sales for the first quarter of 1952 had been good, and compared favourably with sales for the corresponding period last year. There were grounds for confidence but not for complacency. We would have to face more competitive conditions in all our markets and these called for high quality in our products, good service and low costs of production. Towards the achievement of these ends all could contribute.



*The Chairman congratulates the Marston Excelsior team, winners of the first aid competition*

Mr. Bingen spoke next and told the meeting that roughly 30 per cent. of what we manufacture in Britain found its way into the export market—£58 million out of £195 million—but experts reckoned that in addition we exported last year a further £23 million in the form of finished goods, such as the paint and leathercloth of motor cars shipped overseas. This was an achievement of which we could be proud, but it would be difficult to keep it up next year, particularly as some of our best customers, such as the Argentine and Brazil, were short of sterling as they were not selling so much in the British market. Moreover, we were now up against German competition, said Mr. Bingen. Our greatest bulwark against this competition was the existence of an efficient overseas selling organisation.

General Sir William Morgan, who is the Company's adviser on the military aspects of civil defence, followed Mr. Bingen with a talk on the international situation. He spoke simply but with great effect and held the attention of his audience to every word. "We are faced," he said, "not only by a strong imperialistic state with immense reserves, but we are also faced by a creed whose adherents proclaim that they intend to convert the rest of the world by argument or by force. Having seen at fairly close quarters a certain amount of what Russian domination means and the methods they use to gain it and hold it, I have no doubt that to us, who have freedom in our bones, to live under those conditions would be intolerable."

And now things livened up again. Mr. Hastings, of Metals, proposed that the Board should be asked to consider setting up a committee from Central Council to review the administrative cost of canteens. They were not asking, he said, for a permanent committee—just one to meet, report and dissolve. Surely such a committee could do nothing but good. The overheads borne by canteens were too high. The committee would show how costs could be cut.

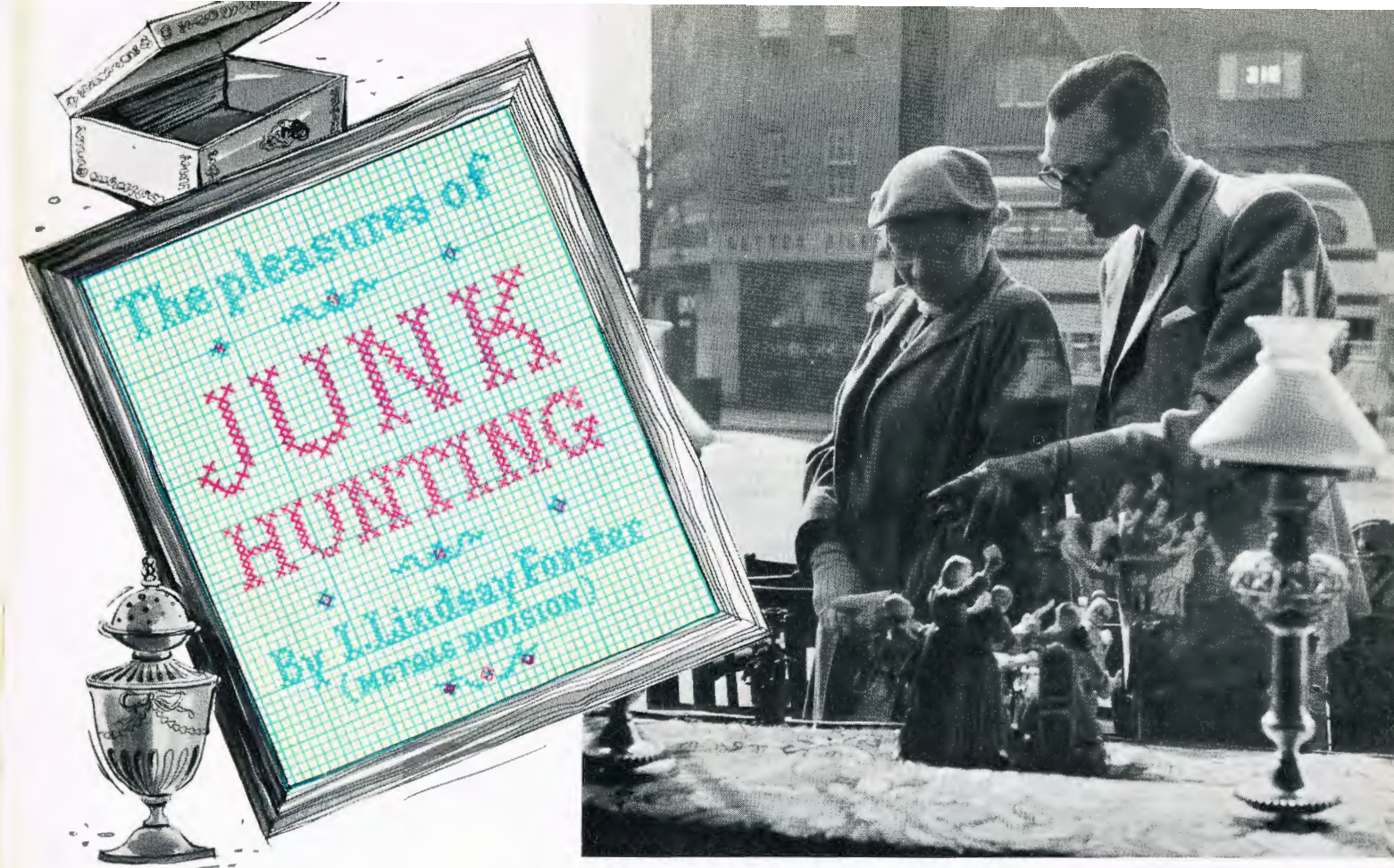
These remarks did not pass unchallenged, and Mr. Grint intervened from the platform. He reminded the meeting that canteen prices were related to running costs only and that all overheads including rates and depreciation (items specially singled out by Mr. Hastings) were borne by the Company.

The chairman then asked whether Mr. Hastings wished to withdraw or amend his resolution in the light of Mr. Grint's statement. But Mr. Hastings refused to be discountenanced and stuck to his guns. Of course everyone was well aware, he thundered, that the Company footed the bill for canteen overheads. But the overheads were still an administrative cost: otherwise why show them in the statement of canteen accounts? Let the committee get to work and they would certainly save a considerable sum of money.

Mr. E. A. Blench, Billingham Division director, also spoke. He made a simple but telling point: as the problems of canteen management varied from division to division, it was surely in the divisions that the matter should be tackled—not by a Central Council committee. Put to the vote the resolution was defeated by 116 votes to 67.

The final resolution of the day was from Plastics Division—that the Company should be asked to subsidise the purchase of safety boots and shoes. It was proposed by Mr. J. Tierney in what was perhaps the most happy speech of the day. The price of safety boots, he said, had risen so much since pre-war that many workers could not afford to buy them, particularly as they did not last more than two months. Safety boots cost a worker roughly a shilling a day, and naturally many people did without. But the accident rate for foot injuries was effectively reduced for workmen wearing safety boots, and Mr. Tierney gave figures to support his point. The subsidy would therefore benefit the Company no less than the workers. Seconded by Mr. R. Cousins the resolution was strongly supported and so now goes to the Board for consideration.

Thus ended a day of debate without great incident—a day perhaps typical of Central Works Council meetings. But only the most superficial would criticise its value. These meetings may be recurrent but they are none the less remarkable—remarkable for the fact that the chairman and other directors of one of the biggest companies in the world get together personally with their workers to resolve difficulties. R.M.K.



**The junk hunter is something more than a mere seeker after bargains—he is a buyer of things of beauty for the pleasure which they give him. None the less every junk hunter buys in the hope that he could sell for more, and Mr. Lindsay Forster is justly proud of his "finds."**

My wife and I are inveterate junk hunters. Our first really good buy was from a funny little shop in a Suffolk village while we were touring that part of the country soon after we were married. There for the sum of only £3 10s. we became the possessors of a little walnut Queen Anne chest of drawers whose beauty, under layers of varnish, grime and general bedraggledness, could only be guessed at by the presence of the obviously original brass handles. Several hours of hard scrubbing with hot water and soap followed by years of steady polishing have brought back in some measure the appearance it must have had when it left the craftsman's workshop two hundred-odd years ago.

There is to me, as there must be to many, a considerable feeling of romance about any article of appreciable age. I have often wondered who the various people were who have owned our little chest, what sort of homes it has been in, what different fashions of clothes it has held—yes, and what will happen to it when we are no longer here to look after it.

Perhaps the golden rule of junk hunting is—never miss an opportunity. Whenever you see a junk shop dive in, however unpromising it may look from the outside, and do not be afraid to say that you only want to look round. You may make a

hundred visits and draw a blank every time, but in such a way I once got, in a grubby little shop in Birmingham, a solid silver pepper pot (hallmarked 1835) for the sum of 1s. 6d. from a man who obviously did not even know it was silver; and on another occasion, for half a crown, a pleasant little water-colour sketch by a French painter of international repute.

Of course, not everything we have bought has been obtained quite so cheaply—there were five whole pounds for a beautiful ivory mah-jongg set (but still a bargain and a joy to play with) which may be quite old, because some of the characters are in a type of Chinese script which is no longer in use. Of course, you may say that not everyone plays mah-jongg, so who would want to buy the blooming thing anyway! *N'importe*—we like it.

In a very ordinary kind of shop we once paid 17s. 6d. for a portrait of a young man by J. Rannie Swinton, a fashionable portrait painter of the early nineteenth century, examples of whose work are now in the National Portrait Gallery. In a pleasant gilt frame—for which we had an immediate offer of £2 by a friend—it is a pastel study of a fair-haired young man with what is obviously going to develop into a beautiful beard and wearing a vivid blue cravat. Done in Rome in 1841, it is





WALNUT QUEEN ANNE CHEST OF DRAWERS bought for only £3 10s. and restored by the author to nearly its original beauty from underneath layers of varnish, grime and general bedragglement

quite possibly a portrait of Ruskin, who was in Rome at that time, and while it is of no great intrinsic worth it is nevertheless a pleasant thing, and the young man now smiles down on those who eat in our dining room.

The game is, on the whole, a fairly light-hearted sort of business and has been the cause of many a smile for my wife and me, such as the time when we were offered a painting by Poussin for fourteen guineas!

When I suggested to the man who offered us such a bargain that he was either a fool or a rogue—since a genuine Poussin would probably command fourteen thousand guineas—there was a pregnant silence before he countered with the usual dealer's reply—"Well, if it isn't Poussin's work who did paint it? Apparently no serious offence was taken, and we are still, after ten years' acquaintanceship and gentle haggling, on quite friendly terms.

One of the interests of junk hunting is that you are, to a large extent, backing your fancy against what possible knowledge the shopkeeper may have of the object under discussion. For instance, if you are offered a beautiful old round-topped table—"a genuine antique that, sir, and worth thirty pounds of any-

body's money"—just measure the two diameters, across and with the grain of the wood; if they both measure the same it is a fake and perhaps worth thirty bob. You see, over the years wood shrinks across the grain and a round table will eventually become slightly oval, depending on the type of wood and its age. If he wants to sell you a nice old oak chest, worm-eaten and "quite genuine," stick a pin into some of the worm-holes and see how far it goes in. Now the woodworm, like the spiv, just cannot go straight, and a worm-hole without a bend after about a quarter of an inch just isn't a worm hole, if you see what I mean. The chest, too, like the round-topped table, is a fake, so leave it for some sucker with more cash than knowledge.

To be a true junk hunter, one must have fairly catholic tastes and the things that appeal must be quite diverse. An eighteenth-century whorled glass bottle for 1s. 6d. (excellent for salad cream, this), an early Victorian carved wood gilt fire-screen for 35s., a Robert Morden map of Warwickshire printed in 1695 for 10s., a late Georgian pewter half-pint mug for 2s. 6d., an early edition of Mrs.

Gaskell's book *Cranford* in almost mint condition for 4d.: these are some of the unconsidered trifles that have come our way over the years and from odd corners up and down the country.

It is a comparatively rare thing for the true junk hunter to be a collector, to use the word in its proper sense. The mere fact of being a collector means that one is really interested only in particular types of object—furniture, books, paintings, pottery or what have you—and that one is prepared to spend up to the hilt and at normal market prices on additions to one's collection. To me this seems somewhat pointless and egotistical, and the collection can often at least be only an indication of the collector's bank balance.

Part of the fun of adding to one's collection of odds and ends is the repair and restoration usually necessary before the prize is ready to take its place in the general scheme of decoration or furnishing. As distinct from the more ambitious collector, whose pieces must be in mint condition for him to be even interested, the true junk hunter must needs be a bit of a handyman, ready to do the odd spot of titivation to any find that needs it.



DELFT PLATES, part of the author's collection of some twenty pieces picked up for a few shillings here and there. Porcelain was first made at Delft in Holland in the seventeenth century.

I remember one such job of repair to a very pleasantly proportioned rosewood chair which we picked up in the early days of the war. This had obviously been at the mercy of the elements in the junk man's yard for many a long day and looked rather pathetic and bedraggled when I got it home and up into my workshop. After a certain amount of repair to the back and the replacement of odd bits of boxwood inlay, as well as the provision of a new piece of brocade for the seat and a thorough cleaning and polishing, it has taken its place in one of the bedrooms. Although described by one of our friends as a cross between "Heppledale" and "Chippendale," it looks worth considerably more than the 15s. I gave for it.

Obviously, as far as the restoration of furniture goes, various woods require different treatments, but I have found that in nineteen cases out of twenty a fairly hard scrubbing brush and some hot water and soap form the first and best method of approach. It is surprising what an amount of general dirt and grime, the result of often years of neglect, must be removed before work can be started on restoration and polishing.

My experience has now limited me to two treatments only: for oak, polish with linseed oil until it has reached the depth of darkness you want and then finish off with wax polish; for all other woods (mahogany, walnut, rosewood and so on) just use a good wax polish and years of elbow grease.

Please do not use french polish on good wood—this is just a quick means of getting a finish that is only spurious, anyway.

Wax polish and hard work may not give in your lifetime that deep lustrous patina that comes only with age, but at least you have laid the right foundation for someone else to complete. Decent furniture will outlast any of us, so while you have it in your charge see that it is decently treated.

In furtherance of this idea I am at present working on a little teapoy—a small round-topped table about 24 in. high with centre pillar and tripod legs—which I got recently for £1. This was not in very good condition—I would have had to pay



NEEDLEWORK SAMPLER bought for 3s. 6d., including the gilt frame. It was then so dirty that not a word could be read. Soaked in Stergene it revealed its beauties—and the date, 1799.



much more if it had been—and had at some time or other been french polished. Somebody had consistently had it too near the fire, and as a result I have literally had to scrape it all over to remove the blisters.

Another thing which now looks vastly different from when we first had it is a needlework sampler for which we paid the magnificent sum of 3s. 6d., including a gilt frame. It was so dirty that we could hardly read a word of it and could not decipher the date. When we got it home and out of its frame I placed it over a piece of fine net stretched over an old picture frame and soaked it in warm water and Stergene. Then for hours I poured warm water and detergent through it until no more dirt would come

out and now it is back in its frame—air-sealed to last for years and a joy to look at, with its alphabet, its birds and beasts, trees and flowers, and the date for all to see—1799, the year of Aboukir and Pitt's imposition of income tax!



WATER-COLOUR SKETCH bought for 35s. It is unsigned but shows masterly draughtsmanship, rather in the style of Rowlandson's early work before he became a caricaturist.

Finally, it is always worth while having a look at the pile of old picture frames and "works of art" that is usually found tucked away in some odd corner. Ninety-nine times out of a hundred you will draw a blank, but the odd one may be rewarding.

I have found several pictures and drawings at various times. One that we like particularly is a quick water-colour sketch of a farmhouse with trees at the sides and the figure of a woman with a child in her arms standing in front. It is unsigned but obviously the work of someone who really knew how to draw and shows quite masterly draughtsmanship, rather in the style of the young Rowlandson before he started on his somewhat grotesque cartoons and caricatures. I paid only 35s. for it, but it is certainly worth much more than that.

You never know what you will find, but you may, some day and with extraordinary luck, see your name in the papers as the finder of a masterpiece for a song—and again you may not. But it's fun looking.



EARLY VICTORIAN CHILD'S WRITING DESK in *lignum vitae*, with beautiful brass inlay. Used today by the author's wife as a jewel case, it was bought for 5s. with some of the inlay missing and a hinge broken.

# VALE OF FRIENDSHIP

## The story of the Llangollen International Musical Eisteddfod

By A. R. Longley (Alkali Division)

(Illustrated by the author)

Once again this month singers and dancers from the world over congregate at Llangollen. The scene is gay with flaunting national costumes and the babble of many tongues. It is a true meeting of nations in friendship and happy rivalry.

THE Llangollen International Musical Eisteddfod is a festival of music and folk-dancing. It began on a relatively small scale only five years ago, and has now become not only a great event in the life of Wales but an increasingly important feature in the musical calendar of Europe.

Held annually during the first week in July, its setting is the romantic and picturesque Vale of Llangollen, to which Wordsworth gave the peculiarly appropriate title of *Glyn Cyfeillgarwch*, which means "the Vale of Friendship." The sunshine on the last occasion seemed to mirror the joy that filled the valley from end to end.

Llangollen is a quiet town of some 3000 inhabitants, which lies so close to the foot of the great mass of the Berwyn mountains that it sees little of the southern sun in winter. It is hemmed in by brown wooded slopes to the south and west, and to the north by the precipitous limestone crags of Eglwyseg that seem to hang like a great curtain of rock. Eastwards the valley opens through a gateway of hills to the distant blue Cheshire plain. High above the town



A Portuguese national costume from Paços de Brandão

on a steep pyramidal hill stands the ruin of the Castell Dinas Brân, and down the narrow rocky valley under the trees and the old town bridge the brown swirling waters of the Dee rush and bubble in happy confusion. It is difficult to imagine a scene more fitted for an event where peoples of the world meet to sing and dance.

During the Eisteddfod the town is transported to another world. Excitement mounts as the choirs and parties arrive. The colour of national costumes adds to the air of festivity—bright red, yellow and blue skirts wheel and circle in gay dances on the fourteenth-century bridge to the rich throb of guitars and the electrifying rhythm of twenty or thirty pairs of castanets. Heels stamp and hair falls over flashing eyes. "Olé, olé, anda, andaa!" . . . we are in Seville or Almeria. Shepherds' pipes are heard out on the hills, deep drums echo across the valley . . . we are in the mountains of Macedonia. A choir from Lübeck entertains visitors in the street with "Nun Ade, du mein lieb' Heimatland" while a policeman assists the traffic. More and more costumed figures arrive from Europe, South America, the Far East, India,





UKRAINIAN COSTUMES worn by a group, resident in Britain, which performs national and folk-dances from the Carpathian Mountains. The national dance of the Ukraine is the vigorous gopák, which features a leaping movement by the men, and the prisyadka, which consists of making rapid kicks from a sitting position. The dances are accompanied by a small group of instrumentalists, and sometimes dancers and musicians all sing in chorus. The national instrument of the Ukraine is the bandúra; this resembles the zither, but it has a graceful oval shape and a short neck. The player squats on the ground and holds the instrument between his knees. The man's costume features some fine embroidery on the shirt front, neck and cuffs.

the Ukraine. Yes, for a week Llangollen, already beautiful, borrows plumes from all over the world, and 130,000 people come to admire them.

At the festival last year I was asked by the BBC to work as interpreter and liaison officer for their Welsh Region team. This meant that I had to interview all the foreign groups, taking notes of their songs and dances so as to make these interesting and intelligible to the audiences. The performances took place in a pavilion large enough to hold some 10,000 people. There were competitions during the day and concerts in the evening.

During the early part of the week I made contact with each group as it arrived and helped to rehearse the foreign choirs who were taking part in the Friday evening broadcast of the

*Alleluia Gentium*. By Wednesday, the great day of the folk-dancing, when the costumes everywhere made the fields and hills glitter with colour, my work for the BBC really began in earnest.

There were the Ober-Österreichische Sing- und Spielgruppe from Linz (Austria), the Grupo de Viana do Castelo from Oporto (Portugal), the Ukrainian dancers, the Jodlerklub Thun, the Yugoslavs and Indonesians, La Pastourelle from Rodez (France), and a Finnish choir whose name, Eteläsuomalaisen Osakunnan Laulajat, was just about as great a tongue-twister as anything on the bill. The announcers had to be coached and prompted in the pronunciation of these names and song titles. The only language (apart from English) on which the announcers needed no prompting was, of course, Welsh.



AUSTRIAN DANCERS, members of the Ober-Österreichische Sing- und Spielgruppe from Linz in Upper Austria. The group's activities include folk-singing and yodelling, folk-dancing and the playing of folk-music. Their delightful songs recall springtime in the high alpine meadows, and a piece called "Glockenjodler" is rendered by eight voices imitating the sound of cowbells.

In all this great gathering of the nations the linguist finds plenty of opportunities to converse in an atmosphere far removed from his everyday occupations. There is at Llangollen quite an army of interpreters gathered in from various walks of life who find unusual calls on their conversational powers, which may range from telling an Italian where he can buy a carburettor for his car to explaining to the local doctor what is the trouble with a young Spaniard who has fallen ill.

As I moved through the crowds I found difficulty in escaping problems of the most varied kind. Part of the fun is the element of bewildering variety. The gallant lady who bears on her badge the words "Chairman of the Hospitality Committee" comes to me and says "Mr. Longley, what on earth



YUGOSLAV FOLK-DANCERS. The girl's costume is from Croatia, the man's from Hercegovina. The traditional dance is the Serbian kolo, a quick lighthearted chain dance in which the dancers hold hands or belts, take a few steps to the right, then a few to the left, followed by a few steps forwards and a few steps backwards. The instrument accompanying is the frula, a small wooden pipe.

is the Spanish for 'Hospitality'?" "Alojamiento"; why?" "I am continually being presented with fainting cases and cut fingers. The Spaniards seem to think I am a nurse!" Making my way through the throng near the back-stage area I am seized by the arm. A girl leaning on a dreamy-eyed youth from Oporto says "Will you ask him when he goes back?" "Monday." "Has he a girl in Portugal?" "No, but ask her if she will take a walk up the hill there." "Yes." "Muito obrigado." "Diolch yn fawr."

One of the Spanish dancing groups came from Sabadell, near Barcelona. This party had a most hazardous journey in their own coach, arrived too late for the competitions, and had to be squeezed into the concert programmes. Their disappointment on arrival was accompanied by much effervescence



and argument, much arm-waving. It took several hours to cool, but once reconciled to their misfortunes they waxed enthusiastic about the Eisteddfod.

One member of the party spoke some "Ingleesh," but he had lost his voice. He came to me one evening back-stage. "Pleess Meesstairr Longeley," he croaked, "Do we dance heerr tonight" and with a sharp sweep of the arm "or no?" "No." "Eet eess goode! Tonight we dance een de town!" And off they went. This gentleman expressed his appreciation of the Eisteddfod thus: "Deess festival eess magneefico! Eef I go een de town eet eess a [sweep of the arm] día de fiesta! Eef I go een de field eet eess a [sweep of the arm] día de fiesta! Eef I go een de heelss, eet eess a [sweep of the arm] día de fiesta! Everywhairr eet eess a [sweep of the arm] día de fiesta! Deess festival ees magneefico!"

At the lunch table I am surrounded by a league of nations. A Spaniard sitting by me wants me to tell the German opposite that in Spain they prefer their salads done in oil and vinegar. The German agrees and asks whether they have much food in Spain. A Yugoslav at my other side asks me in Russian whether he may have coffee instead of tea. The Spaniards prefer coffee, black or white, or they will have milk, or even water. Tea is like medicine! *Caramba!* No wine? *Hombre!*

Then the waitress arrives and says someone is ill at another table and could I please find out what is the trouble. I find a Portuguese girl weeping and surrounded by her friends. She is not having her meal. A delicate situation. One of her friends who knows me explains that the "pobre de Maria" has had no letter from home, and she is distracted. Ill? *Ah, não senhor!*

I shall not forget the waitress's expression of blank astonishment when I told her what was the trouble.

Apart from these lighter moments, there was much work to do for the Friday evening live broadcast of the *Alleluia Gentium*, a selection of hymns of praise by Bach, Handel, de Lasso, Victoria, Palestrina, and others, arranged by W. S. Gwynn Williams, the Music Director of the Eisteddfod. This had to be sung in English, and as the choirs arrived final rehearsals began.

Each choir was taken in hand by Gwynn Williams, whose instructions and comments had to be translated into the

language of the choir. In the later stages of the rehearsals we had before us all the foreign choirs taking part, and the interpreting had to be done into French, German, Italian, Spanish and Portuguese—all at once! This is just about as formidable a task as I have ever had to face.

One choir at first sang the words "Holy Lord, though not worthy that Thou shouldst my dwelling enter" as though they were going into battle! Sometimes the more temperamental

had to be cajoled. There were long hours of these rehearsals in the Town Hall and elsewhere, hours of toil, late teas, and even tears. But all went well in the end, and the great audience joined in singing the hymn "Llanfair" by Robert Williams.

In addition to most of the home stations, six foreign stations broadcast the programme. As I look at the notes before me I see Hywel Davies' pencilled words: "This is the Welsh Home Service. Tonight, from the International Musical Eisteddfod at Llangollen in North Wales, we broadcast a performance of the *Alleluia Gentium*, an international ceremony of praise." I recall the impressive silence that fell on the audience as the tiny voice spoke from the loudspeaker in the BBC monitoring hut, introducing the concert. It was a moving experience, and as the audience joined to swell the last hallelujah of Handel's work I remember the feeling of relief with which I hurried behind the scenes, the 700 performers coming from the stage, the pressmen trying to collect impressions, the mopping of brows.

One singer said "If we had crossed Europe to do nothing but this it would have been well worth the journey."

Several members of foreign choirs expressed to me their astonishment at the quality of singing achieved by the audience. Never had they experienced anything quite like this. Trained choirs, yes; but an audience of ten thousand, and with sopranos singing a descant! *Merveilleux! Fabelhaft! Stupendo! Incomparable!* Of course, how were they to know that, as an old Welsh lady told me once in Beddgelert, "We have no choirs in Wales like you have in England—we all sing!"

For me all this was a great change from my usual translating work, and it was, I think, the most interesting type of intense refresher course in foreign languages that I have ever taken. I am grateful to the Company for lending me to the BBC.



A NORWEGIAN NATIONAL COSTUME worn by a member of a choir which last year sang arrangements of Norwegian folk-songs

# I.C.I. NEWS

## MR. H. O. SMITH : MR. B. E. TODHUNTER

THE *Magazine* announces with deep regret the death of Mr. H. O. Smith, C.B.E., on 17th May.

Mr. Smith only retired from the Board of the Company at the end of last year, after more than 43 years' service with I.C.I. and its predecessors. It was as assistant to Mr. B. E. Todhunter, whose death is also announced on this page, that he began his career in Explosives Trades Ltd. in 1918.

As Dr. C. J. T. Cronshaw recalled in the *Magazine* in February of this year, Mr. Smith was Personnel Director of I.C.I. for a longer period than any other person: from 1936 to the end of 1951. "It was Mr. Smith who built up the organisation which is now administered by the Personnel Director," wrote Dr. Cronshaw. "A full measure of credit for the I.C.I. policy in personnel affairs would be denied by him but would be unstintingly accorded to him by all those who have shared the burden and worked towards this goal."

At the Central Works Council, whose meetings he himself had so often attended, a tribute was paid to Mr. Smith by the Chairman on 23rd May. "I would like to say how much we regret the somewhat sudden death of Mr. H. O. Smith," said Mr. Rogers; "a man who was a great person in I.C.I., whom we all liked and knew well, to whose wisdom we all owed so much from time to time, and a man who certainly looked much younger than his years. He died very suddenly—almost in harness, one might say—although he had in actual fact retired. It seems a sad thing that a man like him who worked hard all his days for us and for the Company should, after a very short time, be stricken in this fashion. I am sure you will regret with me this melancholy and sudden death of Mr. H. O. Smith."

Mr. J. L. S. Steel, Group A Director, writes:

"It was with grief and a sense of personal loss that Mr. H. O. Smith's friends heard of his death. H.O., as he was known affectionately, maintained a youthful appearance and almost boyish zest for life that belied his years. It seemed almost incredible that so soon after his retirement he should be taken from us.

"There is no better way of getting to know people than working alongside them. It was my great good fortune to be appointed Joint Personnel Director with H.O. in 1947, and my all too brief association with him was to me one of the happiest experiences of my life. He was immensely interested in all aspects of his job, and took infinite trouble to straighten out fairly and justly all the problems brought to him. He was a very accessible man and loved discussion. He would listen with keen interest to the suggestions or statements of others, and discussion with him never became acrimonious. "I don't agree with you there" he would frequently say, but he would

accompany this with a disarming smile and proceed to produce from the storehouse of his mind all sorts of recollections to illustrate his point of view, for he had an unusually wide experience of men and affairs and a most retentive memory regarding them. Though he held certain opinions firmly he never closed his mind to what others had to say; he gave views contrary to his own careful consideration and due weight.

"He was never happier than when meeting and mixing with people of all ranks in the Company's service. I know he specially appreciated the informal discussions he used to stimulate at lunch with the Trustees of the Workers' Pension Fund, and he would talk long afterwards about some of the views expressed.

"His work on the personnel side of the Company had an immense influence and will be an enduring memorial to the man."

### Mr. B. E. Todhunter

The *Magazine* also announces with deep regret the death on 25th May of Mr. B. E. Todhunter, O.B.E. Mr. Todhunter, who was in his 87th year, joined the Cotton Powder Company Ltd. in 1900; this Company subsequently became one of the constituent companies of Explosives Trades Ltd. (later known as Nobel Industries Ltd.), of which he was appointed a director on its formation in 1918.

Mr. A. J. Quig, deputy chairman of I.C.I., writes:

"The passing of Mr. B. E. Todhunter reminds those of his colleagues who had the privilege of working with him for many years that he was one of the original I.C.I. executive directors. He remained on the Main Board of I.C.I. until his retirement at the end of 1944.

"I knew Mr. Todhunter in the days when he was a competitor. At that time I was Home Sales manager of Nobel's Explosives Company and he was managing director of the Cotton Powder Company. His energetic management made him a very formidable competitor indeed. No-one in the old Nobel Company was at all surprised on the formation of Explosives Trades Limited, which embraced a number of explosives companies including the Cotton Powder Company, to find that Mr. Todhunter, our valiant competitor, had at last joined us as a friend and not a rival.

"It was my privilege to serve under him on the formation of Nobel Chemical Finishes (now the Paints Division) of which company he was chairman. It is a curious thing, but Mr. Todhunter's innate shyness was sometimes misinterpreted, or at least misunderstood. I found as managing



director of N.C.F. that, provided you had your story properly prepared, your facts marshalled and your own opinion clear in your mind, you could be sure of a sympathetic hearing. He was not the kind of man to vacillate in his own opinions nor could he brook such weakness in others. As a result people who knew him well found him charming, kind, generous and above all extremely able. Naturally I had occasion to seek his advice and guidance on a huge variety of subjects and I found him invariably kind, but he wanted to be certain that you had an opinion of your own before he expressed his.

"He was a world-wide traveller, born in New Zealand in 1865, and up to the end he was the staunch advocate of every-

thing Australasian. In him everyone from Australasia had a worthy champion and real friend.

"It is difficult to find many men of Mr. Todhunter's particular training and outlook today, but the need for men of character, vigour and enterprise—qualities which he possessed in great measure—is even more pressing than in his early days. In his own quiet way he probably did more to teach and encourage young men than he ever realised himself.

"His passing is regretted by all his colleagues and a multitude of friends. He left a unique mark on the Company's affairs, and he undoubtedly helped to create the tradition which it is our privilege to carry on."

## BIGGER PENSIONS FOR WORKERS

With effect from 29th September this year there will be a 20% increase in existing and all future members' pensions paid out of the Workers' Pension Fund. This announcement was made at the Central Council Meeting at Scarborough on 23rd May.

Members contributions will remain at their present rate. The increase will be made possible by employing the fund surplus of £2,345,000, and by the Company paying nearly £½ million more into the fund every year, explained Mr. J. A. L. Young, head of the Pensions and Assistance Funds Department. He went on to give an outline of the improvements and changes in benefits, making it clear that the detailed amendments to the rules had still to be worked out.

"All pensions being paid on 29th September, 1952," said Mr. Young, "will be increased on and from the week commencing on that date by 20 per cent. Every member's pension becoming payable after 29th September, 1952, will be of an annual amount equal to two-fifths of the total contributions paid by the member, or credited to him in respect of back service. This compares with the present fraction of one-third and again is an increase of 20 per cent. Total contributions paid or credited will include the 10 per cent. increase in the value of contributions to 31st March, 1946, already granted out of the previous surplus.

"On and from 29th September the minimum member's pension will be increased from 10s. per week to 15s. per week.

"On and from 29th September there will be introduced, in place of the existing death benefit, pensions for the widows and children of male members. These will be a proportion of the pension the member was receiving, or of the pension to which he would have been entitled had he retired on the day of his death.

"The proportions are:

To the widow for life or until remarriage:	one-half of the member's pension.
To the children under 18 years of age, divisible equally among them:	one-sixth of the member's pension.

"The minimum total to a widow and children will be the sum of 10s. per week for the widow, and 5s. per week for each child, subject to such total not being more than the member's pension.

"On the death of a member in service, the pension to his widow or children will be guaranteed at the full member's rate for the first five years.

"On the death of a pensioner within five years of retirement,

the pension to his widow or children will be guaranteed at the full member's rate for the balance of the five years.

"If, because of the widow dying soon after her husband, or for any other reason, the total amount paid out in pension to a member and/or his widow and children is less than he would have been entitled to under Benefit 5, then the balance will be paid to his estate. (Benefit 5 is the cash benefit paid when a member leaves the Company's employment for reasons beyond his own control.)

"These widows' and children's pensions are, of course, of much greater value than the present form of death benefit, which, as you know, gradually reduces by the amount of pension paid out, but if any male member in the fund now would prefer that, on his death, his estate should receive the death benefit under the existing rules, he will be given the opportunity before 29th September of indicating his wishes.

"For the existing female members the present form of death benefit will continue to apply.

"In addition to these improvements and changes in the form of benefits, it is proposed at the same time to make other alterations to the rules.

"There have been a number of requests through the Works Council machinery for an opportunity to be given to those who have failed to join the fund within the prescribed time limit to become members. In view of the substantial improvements proposed in the benefits the fund will be reopened for a limited time to existing employees not already members who will be permitted to join as new starters.

"All workers engaged on or after 29th September will be required to join the fund on entering the Company's employment, or on reaching the age of 20.

"On and after 29th September, workers who are retained in the Company's employment beyond the age of 65 will be allowed, if they wish, to defer taking their pensions until they do retire, and if they do will then receive an actuarially increased pension."

### Mr. Inglis Assistant Chief Labour Officer

Mr. A. W. Inglis has been appointed Assistant Chief Labour Officer with effect on and from 1st June.

Mr. Inglis is very well known to past and present members of the Central Works Council, of which he has been secretary since 1935. His faultless knowledge of the council's rules of procedure, and the firm, tactful and unobtrusive guidance that he has given to the meetings has won him a fund of admiration and friendship.

Mr. Inglis started work at the Edmonton factory of Eley Brothers Ltd. in 1919, after war service in the Army. He was transferred to Witton in 1922, and in 1928 was appointed Metals Division Labour Manager. In 1935 he was transferred to Central Labour Department, where he has remained ever since, except for three years spent during the war as manager of the agency factory at Yeading, Middlesex.

### Apprentices Learn from Leonardo

Eight I.C.I. engineering apprentices visited London last month at the invitation of Central Labour Department. With nearly a thousand other apprentices from all over the British Isles they came to see the Leonardo da Vinci exhibition at the Royal Academy.

The suggestion that apprentices should be given an opportunity of seeing for themselves the works of the fifteenth-century artist, scientist and engineer originally came from Sir Robert Hyde, founder of the Industrial Welfare Society. Sir Gerald Kelly, president of the Royal Academy, welcomed the idea, and when the apprentices visited the academy in parties of 200 he showed them round in person and gave a talk on Leonardo as an artist. Mr. K. R. Gilbert told the apprentices something of Leonardo's qualities as a scientist and engineer.

On the evening of their arrival, the eight I.C.I. apprentices—from Alkali, Billingham, Lime, Metals, Nobel, Salt and Paints Divisions and Wilton—were taken to the Palladium Theatre. Before going to the academy the next day they were shown round the Houses of Parliament by Mr. Richard Fort, M.P. (who is an ex-I.C.I. employee), and taken on a tour of London.

### Billingham Marksmen win Directors' Trophy

Billingham A rifle team have won the Directors' Trophy, awarded each year to the winners of Division 1 in the I.C.I. Rifle League. Mr. J. M. Cullen, honorary secretary of the league, gives this news in his report on the 1951-2 season.

"Nineteen teams entered the league this season," says the report. "The league was divided into three divisions, built up according to submitted averages; with one or two exceptions the teams in each division were fairly evenly matched.

"Circumstances beyond the control of certain teams necessitated the holding up of some results of the rounds, but generally speaking the clubs returned their targets with better regularity than in the previous season. It is hoped that those entering next year will try even harder to conform to the dates and thereby keep up the continued interest of all those participating. There is nothing worse in the running of a league such as this than to have long delays between the shoot and the publication of the results.

"We congratulate Billingham A on winning Division 1 and the Directors' Trophy. They went through almost unbeaten with a very fine average of 494.3. Each member of the team will receive a specially designed pocket badge.

"In Division 2, Kynoch B are to be congratulated on winning with an average of 484.7. Following closely are Castner-Kellner, whose improvement is most encouraging.

"Nylon B did very well to win Division 3 with an average of 464.1.

"The winners of Divisions 2 and 3 will now compete for the I.C.I. League Cup, which will consist of one shoot under MacRae Handicap.

"The best individual efforts were made by N. Ackroyd (Billingham A) and A. Skinner (Kynoch A), both of whom

made the almost incredible average of 99.83 for each of the six shoots. Congratulations to them both for such a fine effort.

"In Division 2 J. Horan (Nylon A) was not far behind this average. He put up an average of 98.7, which is extremely good shooting over 16 matches. The best effort in Division 3 was made by R. D. Smith (St. Rollox) with the excellent average of 97.8 over 14 matches.

"From these results it will be clearly seen that a great improvement has been made in all divisions. We hope that the entry next season will break all records and enable a fourth division to be formed.

"It would not be right to conclude this short report without a word of thanks to the divisional statistical officers for the excellent way in which they conducted the shooting."

### 1951-2 RESULTS

DIVISION 1	S.	W.	D.	L.	Pts.	Agg.
1. Billingham A ( <i>Directors' Trophy and Pocket Badges</i> )	6	5	0	1	10	2966
2. Kynoch A ( <i>Bronze Medals</i> )	..	6	4	0	2	8 2957
3. Ardeer A	..	6	3	0	3	6 2936
4. Chance & Hunt A	..	6	0	0	6	0 2855

#### Individual Averages (6 matches)

1. N. Ackroyd (Billingham A)	(Gilt Medal)	99.83
A. Skinner (Kynoch A)	..	.. 99.33
3. R. Featherstone (Billingham A)	..	.. 99.33
4. F. Brookes (Billingham A)	..	.. 99.17

DIVISION 2	S.	W.	D.	L.	Pts.	Agg.
1. Kynoch B ( <i>Gilt Medals</i> )	..	16	14	0	2	28 7756
2. Castner Kellner ( <i>Bronze Medals</i> )	..	16	12	1	3	25 7706
3. Nylon A	..	16	12	0	4	24 7701
4. Ardeer B	..	16	9	1	6	19 7714
5. C/E Dept. Runcorn	..	16	8	0	8	16 4931
6. Billingham B	..	16	7	1	8	15 7403
7. Chance & Hunt B	..	16	5	1	10	11 7485
8. Hillhouse A	..	16	3	0	13	6 5874

#### (The Buxton Team withdrew)

#### Individual Averages (16 matches)

1. J. Horan (Nylon A) ( <i>Gilt Medal</i> )	..	.. 98.7
2. W. N. Raper (Castner Kellner)	..	.. 97.8
3. J. Womphrey (Billingham B)	..	.. 97.7
4. A. G. Coleman (Kynoch B)	..	.. 97.4

DIVISION 3	S.	W.	D.	L.	Pts.	Agg.
1. Nylon B ( <i>Gilt Medals</i> )	..	14	13	0	1	26 6498
2. St. Rollox ( <i>Bronze Medals</i> )	..	14	9	1	4	19 6474
3. The Frythe, Welwyn	..	14	9	1	4	19 6459
4. Bradford Area Office	..	14	9	1	4	19 6286
5. Middlesbrough	..	14	6	0	8	12 5601
6. Hillhouse B	..	14	5	1	8	11 5448
7. C/E Dept. Runcorn B	..	6	2	0	4	4 2433

#### (Welwyn, Plastics, withdrew)

#### Individual Averages (14 matches)

1. R. D. Smith (St. Rollox) ( <i>Gilt Medal</i> )	..	.. 97.8
2. G. Boothroyd (St. Rollox)	..	.. 95.7
3. E. March (Nylon B)	..	.. 95.5
4. G. Thompson (Nylon B)	..	.. 93.4

## ALKALI DIVISION

### Alkali Man in the Chair again

One Alkali Division man vacated the chair of Northwich Urban District Council in May only to be succeeded by another: Mr. W. H. Young, assistant Division education officer, has been elected chairman in succession to Mr. Sam Williams, assistant safety officer of the Division, who returns to the ranks after a successful year of office.

Six years' experience of council work have given Mr. Young strong views on the running of meetings. In his inaugural speech he reminded his fellow councillors of the fundamental rules for efficiency in council—what he called the A.B.C.



of the council chamber, where A stood for the Agenda, which should be adhered to however interesting the red herrings might be, B for Brevity, keeping to essentials and leaving details to the officials, and C for Co-operation both inside and outside the council chamber. Mr. Young firmly believes that party politics should be excluded from local government and is himself, of course, an independent member. Northwich should prosper under such leadership.



Mr. W. H. Young

After taking his B.Sc. degree and doing post-graduate work in chemical engineering at King's College, London, Mr. Young joined the Research Department at Winnington in the summer of 1939. A few months later he went on a works managers' course and has since spent most of his time at Winnington and Wallerscote Works—in the Power Services Department and on the Polythene and Caustic Plants. In January this year he was transferred to his present position in the Education Department where he is in charge of the Foremen's and Chargehands' Training School. He is an associate member of the Institution of Chemical Engineers and of the Royal Institute of Chemistry.

## DYESTUFFS DIVISION

### Retirement of Mr. E. O. Wisbey

The works manager of Dyestuffs Division's Grangemouth Works, Mr. E. O. Wisbey, retired at the end of May after 36 years' service with the Company.



Mr. E. O. Wisbey

Mr. Wisbey started work with British Dyes Limited in March 1916 on the manufacture of T.N.T. at their Turnbridge Works in Huddersfield. In 1917 he was transferred to the new Dalton Works and took charge of several plants engaged in the manufacture of intermediate products for dyestuffs.

Ten years later Mr. Wisbey was transferred to the Operating Section at Hexagon House, Manchester, and during his

four years there he made several trips to different parts of Europe in connection with new developments and processes.

In 1931 he was appointed works manager at Trafford Park Works, and after 10 years there he became works manager at Grangemouth Works. During Mr. Wisbey's career at Grangemouth a number of new plants have been erected and there has been a considerable increase in the manufacturing activities and the output of the factory. The re-opening of Regent Factory at Linlithgow for the handling of pharmaceutical products also took place during this period, and was another of Mr. Wisbey's responsibilities.

Mr. Wisbey's chairmanship of the Recreation Club at

Grangemouth Works has been characterised by expansion of the club in many ways. He is a member of the Grangemouth Rotary Club and holds several vice-presidencies in local and district organisations. The people in the works regard as a dominant characteristic of Mr. Wisbey his never-flagging interest in education, in the training of operators and in the necessity of passing information right down the line.

### Frogmen at Huddersfield Works

Frogmen were busy in Huddersfield Works recently, when sheet-steel piles had to be removed from the bed of the River Colne. The piles had been driven into the river bed to act as a coffer dam during the building of a new Pumping Station in the works. After they had served their purpose they had to be cut off at river-bed level, and arrangements were made with a Manchester firm of divers to do the job.

These divers are a peacetime version of the wartime frogmen; they can operate in their suits down to a depth of 30 feet.



A frogman comes up for a rest at Huddersfield Works

Their work in the River Colne took about four days because of the poor visibility at any depth greater than 12 inches.

For those interested in technical details, the cutting was done by use of D.C. current operating on copper-coated hollow carbon electrodes, through which oxygen was continually passed. The electrode struck the arc and the oxygen did the cutting. A plastic coating on the outside of the electrode prevented rapid deterioration of the electrode by action of the water.

### Open Day at Grangemouth

Friends and relatives of Grangemouth Works employees were invited on a Saturday in May to come and see for themselves how their menfolk earn their living, and the conditions in which they work.

This was the factory's third open day in six years. Considerable extensions to manufacturing plant and an increase in the number of employees have taken place during this period, but this does not account for the tremendous increase in the interest shown in the work of the factory. 500 people attended in 1946, 800 in 1949, and 1,700 this year.



Friends and relatives of Grangemouth employees see where their menfolk work

The factory is impressive and interesting, particularly to anyone unfamiliar with a chemical works. Not only is it famous for the manufacture of very high quality dyestuffs but also for a range of medicinal products, such as the anti-malarial 'Paludrine,' and the sulpha drugs.

The visitors made the tour in parties of fifteen, each with a guide. To cut down waiting time at the assembly point, a choice of two separate tours, of the east and west sides of the factory, were available. Both tours finished up at the new amenities building, where refreshments were served to the wiser, but rather tired, sightseers after their long walk round the works.

## GENERAL CHEMICALS DIVISION

### Retirement of Division Chief Engineer

Once again we have to salute, with the inevitable tinge of sadness, another old friend and colleague on his departure from us. This time it is to Major Bramwell, our Division chief engineer, that we offer all our good wishes as he leaves us to go into retirement.



Major Bramwell

Major Bramwell's Service with the Company began when he joined Brunner, Mond & Co. at the beginning of 1920 to become a member of the team then being collected by Colonel Pollitt and Mr. H. A. Humphrey to work our preliminary schemes and plant designs for ammonia synthesis. He was thus one of the pioneers of Billingham, where he stayed for five years until moving to Winnington to be Brunner, Mond's research manager. Two years later, soon after the formation of I.C.I., he was transferred to London as deputy to Mr. H. A. Humphrey, who had been appointed consulting engineer to the Company; when the latter retired, Major Bramwell took charge of the Engineering Section of the I.C.I. Technical Department. Towards the end of 1938 he was appointed to the Board of the General Chemicals Division as Division chief engineer.

Throughout the war his energies were concentrated almost

entirely on the large construction programmes involved in the building of the Ministry of Supply Agency Factories which had been entrusted to our Division. The end of the war brought little respite and his attention had to be turned to the work (both new plant extensions and large scale maintenance) long deferred by the war, and to the setting up again of the Division's engineering organisation on a peace-time footing.

Even this very brief review of Major Bramwell's service with the Company reveals that it has not lacked variety; and this variety has been almost as much geographical as technical in its nature, for his work has taken him to many countries. South Africa has seen a lot of him, and it is only recently that he returned from his latest visit there. He has had several lengthy stays in Czechoslovakia and shorter ones in most of the other European countries, and he has had spells in Egypt and the United States and Canada.

But valuable as his work has been both at home and overseas Frank Bramwell himself would probably rank even higher the value of the friendships he has made here, there and everywhere; for he has always thrived on friendship. That, an abounding capacity to make friends, and cheerfulness are perhaps his most outstanding personal characteristics.

### Boilermaker awarded B.E.M.

Mr. Joe Davies, a boilermaker on M. Section Maintenance in Gaskell Works, has been awarded the British Empire Medal in the Birthday Honours List.

Mr. Davies has been with Gaskell-Marsh since 1932, and during the whole of his service has given freely of his leisure time for charitable work. During the second world war he resigned the presidency of the local branch of the Boilermakers' Society, which he had held for 15 years, and devoted the whole of his spare time to the Works Welfare Fund and the British Red Cross. He is a stalwart at the recreation club, and there again is always ready for voluntary work in any capacity.

Last September Mr. Davies was the subject of the "Personality in Profile" in the *Magazine*.

### Oldbury Cooper in Church broadcasts

Mr. Wilfred Rogers, a cooper at the Ammonium Carbonate plant of Chance and Hunt Works, Oldbury, devotes much of his leisure time to the musical activities of Oldbury Parish Church, where he is organist and deputy choirmaster. In recent months B.B.C. listeners have heard his playing on five occasions when the Sunday morning People's Service broadcast has been made from the church.

Mr. Rogers has been 44 years with Chance and Hunt Works at Oldbury. He joined the church choir at the age of 10 in 1905. Soon he was learning to play the organ under the tuition of the church organist, Mr. J. Appleby Mathews, who also played at Birmingham Cathedral. Mr. Rogers says that his playing in those days was confined to the keyboard, since his legs were too short to reach the pedals!



Mr. Wilfred Rogers



For 33 years Mr. Rogers was deputy organist and found time as well to help with the choir training and conduct the church bellringers. He was appointed organist and deputy choirmaster in 1941.

## LEATHERCLOTH DIVISION

### *The Chairman's Visit*

Thursday, 15th May, was a great day for workers in the Leathercloth Division. Many of them had the privilege of meeting Mr. John Rogers, Chairman of I.C.I., when he made an extensive tour of the Hyde factory before proceeding to the Long Service Awards dinner, which was held the same evening.

On the tour of the plant Mr. Rogers was accompanied by Mr. P. C. Allen, Group "E" director on the Main Board; points of interest were shown to them by Mr. W. W. Webb, the production director, and Mr. J. H. McGill, the works manager. All the main departments were visited, and the Chairman showed obvious interest in what he saw, not having



*The Chairman of I.C.I. with women workers at Hyde*

visited Hyde for about 25 years. He was particularly impressed with the Calendering Department, where the bulk of the 'Vynide' is processed, and expressed the opinion that an excellent job had been made of converting what used to be the Rubber Department into a really modern calendering plant. Throughout a long afternoon he stopped to chat with workers and posed for several photographs.

Later on, speaking at the Long Service Awards dinner, Mr. Rogers said that I.C.I. did not regret having purchased an interest in the leathercloth industry, and that he hoped the workers did not regret it either.

## LIME DIVISION

### *Bouquets for Buxton Actor*

A 35-year-old member of the Division engineering staff, Mr. Clifford Butterworth, was presented with the Harold B. Heyworth Trophy by the Mayor of Buxton in recognition of his outstanding performance in winning the individual award at the Buxton Drama Festival in April.

This week of plays is rapidly assuming a leading place in Midland dramatic circles, and the merit of Mr. Butterworth's

performance can be judged by the fact that it was the best given by any member of the eighteen competing societies, which came from towns as large as Manchester, Leicester and Sheffield.

The part which won him the award was that of Joe Rogers, "cosh-boy" in *The Cat* by Bernard Prentice. "In the most complimentary sense, one never doubted for a moment that he was a cosh boy," said a newspaper criticism. "His arrogance, combined with cruelty and cunning, did not seem to contradict his cowardice at the end. For a non-professional actor he shows the greatest promise."

The adjudicator said that the part, which was "fraught with difficulties," was played "in an intensely forceful, subtle and skilful manner."

Mr. Butterworth's spare-time activities are not confined to dramatic work, which he first took up while with General Chemicals Division at Widnes and Weston Point. Since coming to Buxton in 1944 he has played cricket regularly for the Buxton first XI.



*Mr. Clifford Butterworth*

## METALS DIVISION

### *Kynoch Employees build their own Houses*

A group of energetic people in Witton Works have decided that if they want houses during the present housing shortage in Birmingham, they will have to build them. And that is just what they are going to do.

The idea of forming a self-help housing scheme at Witton was put to the Works Council in September 1951 by Mr. Vic Wild, a councillor representing The Kynoch Press. It was greeted with enthusiasm, and the management representatives promised every help short of actual financial aid. Later a meeting was held of all employees at Witton interested in the scheme. 150 people attended and they were addressed by the secretary of an already thriving self-help scheme. After hearing about the advantages and disadvantages of building your own home they organised a further meeting, at which a committee of officials was elected and the name "Kynoch Housing Association" given to the organisation.

The officials chosen were: chairman, Mr. J. W. Hollick (The Kynoch Press); secretary, Mr. D. H. Millward (The Kynoch Press); treasurer, Mr. J. Rogers (Lightning Fasteners).

Mr. Hollick tells the rest of the story in his own words:

"It was decided to engage a solicitor and an architect, and to go ahead with the drawing up of a Trust Deed to formally bind the members into an association. Rules and objects were then decided on, and are briefly as follows: Thirty-six semi-detached bungalows are to be built to house members of the association, in an approximate building time of two years. A building fund of £1,080 is to be established by a deposit of £30 from each member, the remaining £35,000 to complete the scheme to be raised in the form of a loan from the Public Works Loan Board. This loan is repayable over a period of sixty years at an interest rate of 4½%, which would fix the

rents of the completed bungalows at approximately twenty-five shillings per week (including rates and ground rent). Another important point in the objects of the association is that land should be obtained on the north side of Birmingham and as near to Witton as possible.

"Some of the rules which the members have made for themselves are rather stringent. For instance, they undertake to work a minimum of twenty-two hours per week in their spare time and there is a severe penalty system for persistent late-comers, although with men as keen as these one has no doubt that such penalties will never need to be enforced.

"So much for rules and objects. Now you may like to know what has been accomplished during the six months that the scheme has been in existence.

"In the first place it must be remembered that although many of these men are skilled in their own jobs, they possessed very little knowledge of building, so the first and most urgent need was training in the jobs they were to do on their building site. This problem was overcome by attaching all the members to another association which was actually at work on bungalows, splitting them up into the trades they were to adopt, and setting them to work with experienced members of the other scheme. After six weeks of very intensive training the members of the Kynoch Association were reassembled. Working now as a team, they succeeded in building a bungalow entirely on their own. It should be pointed out that there is one experienced builder in the scheme, and he took charge of this part of the training.

"At this stage the committee decided that the men were competent enough to launch out on their own. Training was called off and a start made on the next part of the programme—the search for land. This has proved to be the greatest obstacle so far, for, despite the earnest efforts of the hard-working secretary and officials, disappointment has followed disappointment. Recently, however, negotiations have been going on for thirty-six plots of land at Aldridge, near Sutton Coldfield, and we are very optimistic about the chances of starting to build in the near future.

"While we have been waiting for the land question to be settled the scheme has been pushed forward in other directions. The building department at the Witton Works has kindly promised the loan of a cement mixer, and have told the association that they will be ready to advise on any problem that may arise. The association has purchased a lorry and sufficient tools to carry the job through.

"This scheme, which is the first of its kind to be instituted in any works of I.C.I., embraces a perfect cross-section of employees. From office managers to labourers, these men are united in their resolve to house themselves by their own efforts."

## PLASTICS DIVISION

### *Commissionaire is Landlord at the Local*

When he has finished work at Guessens, Welwyn, Commissionaire George Carleton hurries to the "local." Even if it is before opening time he has no trouble in gaining admission, for the White Horse, Welwyn, is not only Mr. Carleton's "local" it is his home and his spare-time hobby.

Mr. and Mrs. Carleton took over the White Horse three years ago. The 400-year-old inn was dreary and neglected then, Mr. Carleton says, but he and his wife got busy and in no time it was completely changed.

"I just have time for a wash and change and a quick meal



*Mr. Carleton draws a pint for a customer*

in the evenings," says Mr. Carleton, "before my regulars call for their first pints at 6.30. Of course, I couldn't manage as well as I do if it were not for the wife. She knows the business inside out, does all the accounts and looks after the house while I am at work during the day. You know, it's surprising how homely a place can be when there's a woman to see to all the little details."

## WILTON WORKS

### *Safety Trophy won by "unfailing attention"*

Wilton Services and Construction have been awarded the I.C.I. Accident Prevention Trophy for the period 1st July to 31st December, 1951.

The Inter-Division Competition was started in 1951 and the trophy is awarded to the Division showing the greatest improvement in accident prevention in each six-monthly period. Wilton Works is the first to win the trophy in open



*Dr. Armit receives the trophy from Mr. Rogers*

competition with all other I.C.I. Divisions, the Services and Construction accident frequency rate being reduced by 36.3% in the second half of 1951.

The trophy was presented to Dr. J. W. Armit at the Central Council held at Scarborough in May, by the Chairman, Mr.



John Rogers. Thanking him, Dr. Armit said: "Until recently the main activity of the Wilton Site was construction. That activity is recognised as being very much exposed to the risk of men falling from heights and objects falling on men and men falling over things. Our comparatively good record in these works and the fact that we have been able in the last six months to win this trophy is due to the unfailing attention paid to accident prevention by the staff, the workers generally, the Works Council and its Safety Committee, together with the well-directed energy and the unfailing and magnificent enthusiasm of Mr. Hall, our safety officer."

### I.C.I. (HOLLAND)

#### *New Offices at Rotterdam*

The picture below shows the new headquarters of I.C.I. (Holland) N.V. at Rotterdam. This building is in the centre of the city, and from the upper floors trans-Atlantic liners can be seen moored only half a mile away.

The new offices have only recently been completed. I.C.I. (Holland) began its post-war life in three rooms at The Hague, and moved when this accommodation was found too small and it became clear that Rotterdam would be a better place from which to conduct the business. A twelve-roomed house was leased there, but this in turn became inadequate as the Company's business continued to expand. The shortage of warehouse space also became acute at this time, and it was decided that the Company should have a brand new building, providing, in accordance with custom in Holland, both office and warehouse accommodation.



*The new headquarters of I.C.I. (Holland) at Rotterdam*

The design arrived at by Mr. Elffers, a well-known Dutch architect, in collaboration with the Architectural Section of I.C.I.'s Technical Department, allows the warehouse accommodation to be converted quite easily into offices if necessary. There are six floors and a basement, the upper two floors being given over to offices and the remainder to warehousing. The outside of the building is faced with stone. Waste heat from the nearby power station is the main source of warmth; there is also an air conditioning plant. 'Perspex' has been used for wall panelling and light fittings.

### I.C.I. (INDIA)

#### *Recent Retirements*

Two well-known members of I.C.I. (India) retired recently. They were Mr. D. W. Parry and Mr. C. G. Brentford.

Mr. Parry joined Brunner, Mond & Co. in September 1920. From 1921 to 1924 he was at Northwich, where he was an original member of the Winnington Park R.U.F.C. In 1924 he joined B.M. (India) Co. and after service in various parts of India and in Colombo he went to Rangoon as assistant manager. When the Japanese occupation forced a hurried exit in May 1942 he escaped in company with one or two others to Imphal; they covered the long journey of some 300 miles through the jungle on foot.

After a period in the Army Mr. Parry returned to I.C.I. (India) Ltd. In 1950 he took over as manager and local director I.C.I. (Export) Ltd., Karachi, and played a large part in the negotiations leading up to the recent formation of I.C.I. (Pakistan) Ltd. He retired in April and is now living near Bath.

Mr. Brentford joined Brunner, Mond (India) Ltd. on 1st April, 1928. He was appointed manager of Calcutta Division Office in 1938 and held this position until 1946.

During the war he rejoined the ranks of the Calcutta Scottish, in which he had previously held a commission, and as pioneer sergeant taught the young the arts of wiring.

Afterwards he returned to Colombo Office as manager. Many I.C.I. visitors who have passed through Colombo will remember his unfailing hospitality, and one of his last functions before retiring at the end of March this year was to help to organise the I.C.I. Pharmaceutical Conference held in Ceylon in February.

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### OUR NEXT ISSUE

We lead the August *Magazine* with a lively article by Mr. Rex Roberts, Plant Protection director, on the subject of public speaking. Mr. Rex Roberts is himself a gifted after-dinner speaker who can be trusted always to amuse and his article is both instructive and witty. This article is followed by one from the pen of Mr. Norman Vigars, the Fleet Street photographer, whose camera studies of the Ardeer club attracted so much favourable comment. He gives practical advice to holidaymakers on how to make the best use of your camera.

Our colour article is one from inside the factory, and shows the making of leathercloth. To take colour photographs under actual working conditions is a most difficult task, and Mr. E. D. Hess, our colour photographer, is rightly proud of his work.

Next we have an article on the history of bowls from Mr. J. N. Hickson of Salt Division. And finally an amusing story of the difficulties of a young man who was asked to write the script for a documentary film to be made in Ireland—written by Mr. Desmond Wyeth of The Kynoch Press.



# INTERLUDE IN CHICAGO

By R. J. W. Reynolds (Dyestuffs Division)

THEY always warned me that I should not go to Chicago. Perhaps this was due to ideas on the character of that noble Mid-West city gained from the gangster stories and films of the 1930 era. But there it was. I had to go; not to stay there for long, but of necessity as a bird of passage.

I took up the telegram I had only just received from a famous research worker in one of the great American universities and read: CAN MEET YOU WEDNESDAY AFTERNOON. It was now Tuesday afternoon and his laboratory was a thousand miles away. I looked at my friend rather blankly, took his advice, went across the lobby of the New York hotel to the travel agency and requested their assistance. Sure I could get there in time! They suggested that I took the evening plane to Chicago, stayed overnight, and then travelled the odd two hundred miles by railroad next morning. This would get me to my destination at 12.15 p.m. on Wednesday. So far, so good. I asked for a reservation on

the plane. Yes, I could have that. No, not on the direct plane, that was fully booked; but there was one going to Chicago via Buffalo and Detroit timed to leave New York at 5.30 p.m. and to arrive in Chicago at 11.30 p.m.

"Fine!" I said. "I'll like that." It would be interesting to travel by this circuitous route and have a look at Buffalo, Lake Erie, Detroit and Lake Michigan from the air. But what about accommodation in Chicago? I was told that there was no need to worry. That city had plenty of hotels and I could very easily get a room for the night. Good! I paid my dollars, packed my grip, had one for the air with my friend, bade him good-bye, and made my way to the terminal.

In due course I was whisked away to the airport, put on board, and was off, away above the million neon lights which in the evening marked New York City. We travelled on; the month was January and the countryside was under snow. But it was a delightful flight . . . for a time. The moon came up



over a sea of cloud like a large silvery-orange ball. I had a meal, wrote up my notes, and then prepared for the first stop, Buffalo. I did see Buffalo—in a blizzard. "Nothing unusual," said the charming hostess. "It's often like this in Buffalo."

After half an hour the snowstorm ceased. There was the inevitable cup of coffee and we were away again, circling over Niagara Falls, floodlit in all the colours of the rainbow, and then across Lake Erie, white and silent, the moon showing up the frozen surface. The lights of Windsor, Ontario, and then of Detroit appeared, orderly rows forming a gigantic chequered pattern where road upon road made perfect 90° intersections. Soon came Detroit airport and then more delay. Some heavy and decidedly bulky freight in the form of machinery (maybe, I thought, something to do with Henry Ford's factory out here in Detroit) had to come aboard. This meant taking out half the seats and then putting them back again because that freight just would not fit, in spite of the tender coaxing of four coloured labourers who spoke to it like a child.

By and by the plane was off again, but midnight approached and I began to wonder what I was to do about a place for the night. In the end Chicago airport was reached, I was decanted into a big limousine along with two temporary companions, and driven the twelve miles into the by then somewhat deserted city. My companions gave me the name of one of Chicago's great hotels and I entered this mighty caravanserai, the Palmer (pronounced Pal-mer) House.

I wearily made my way to the reception desk, finding to my dismay a small crowd of some twelve or so people all clamouring for rooms. At length I was able to seize my opportunity and ask the clerk if he had a room.

... I think they were startled: I know I was



"Brother," was the reply, "there's no chance at all. This week I guess there's a convention of furniture dealers in Chicago, ten thousand of them, and the whole city is just full." Then perhaps my weary look and overseas accent made him think, for he said "But say, you're a stranger round here, I guess?" I assured him that his guess was perfectly correct. I was indeed a stranger, many, many miles away from home and very much in need of some temporary accommodation. He sighed, "Brother, stick around. There may be something."

I did stick around, sitting in the hotel lobby until 2.45 a.m., by which time nothing had happened. The clerk seemed to have forgotten my existence, or maybe he was preoccupied with those furniture dealers, some of whom were very much in evidence and had apparently enjoyed only too well their annual banquet. It would seem that this was the sort of occasion when their french polishes and other spirituous liquors had to be applied internally instead of externally.

I took another look at my watch and was spurred on to worry that clerk again. He looked up at me, gave a grunt of recognition, and smiled. "Say," he said, "I've gotten news for you. Would you like a bed in a dormitory? We have several rooms fixed up as dormitories on account of the crowd, and if you'd like one, then you're sure welcome."

My reply was to the effect that this would suit me fine, and with a wonderful feeling of relief and satisfaction I gleefully

filled up the registration form. A porter, page, bellhop or what you will, a quiet little man, took hold of my bag and made for the elevator and the eleventh floor. He conducted me along a corridor, went to a door and gave it three hearty kicks, but nothing happened. Apparently he had no key, but he made it clear that the guys inside had that and they could wake up and let me in. Three more hearty kicks were followed by a fierce rattle of the door handle to give added weight to his demand for immediate admission. After a space of minutes there were audible signs of life in the room; then to my surprise and consternation a feminine voice from inside asked, in no uncertain tones, what in hell was going on out there. Quite evidently it was not the dormitory!

My guide beat a hasty retreat and admitted, when out of earshot of that justly annoyed female, that somehow he must have gotten the wrong room number. I agreed with him and sent him below with the instruction that this time he should be more careful or unpleasant things might happen to both of us. Thoughts of gangsters' molls, gunmen and being taken for a ride passed through my mind.

After ten minutes he came up again, this time all smiles and with the room key. I followed him along sundry carpeted passages but soon realised that we were getting no place at all. "Do you know where the room is?" I asked. "No, sir," came the reply; "I only started here this morning and the place is

still kinda strange." However, we had the room number, there was a fire escape plan clearly displayed on the wall by the elevator shaft, and by taking direction from that we soon came to a door bearing a number corresponding to that of the key. At long last bodily comfort and peace of mind were in sight.

I suggested that we should enter quietly so as not to disturb the other occupants, whereupon the bellhop silently opened the door and tiptoed in. I followed, looked around that strange room and, in the dim light which filtered through from the hall, saw three beds in a row.

I asked my guide to put on the light so that I could see which was my bed and prepare myself for some belated sleep. The light went on with a click, and up in those three beds sat three startled girls! At least, I think they were startled; I know I was, for in spite of my weariness I went, very, very quickly. The bellhop came too, rather more slowly and now certainly looking more sorrowful than he had been a few minutes before. "Jeez!" he said. "Was them dames wild!" He and I had words, hard words!

Well, I did eventually find the correct dormitory, I did get some sleep, and I did make my appointment on time. I related the experience to my professional acquaintance next day, but he proved to be a true philosopher, for all he said was "Oh boy, oh boy, oh boy! Well, what d'ya know!"





*Baiting the lines, Arbroath*

*Photo by Alex. Fulton (Nobel Division)*